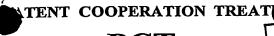
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INTERNATIONAL PRELIMINARY EXAMINATION REPORTUPO

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(PCT Artcle 36 and Rule 70)

Applicant's or agent's file reference 2003OC-707KR	FOR FURTHER ACTION	ION SeeNotificationofTransmittalofInternationalPreliminary Examination Report (Form PCT/IPEA/416)			
International application No.	International filing date(day/mo	month/year) Priority date (day/month/yea		ur)	
PCT/KR2003/001428	18 JULY 2003 (18.07.20	03)	19 JULY 2002 (19.07.2002	2)	
International Patent Classification (IPC) IPC7 B01D 63/04, D01 Applicant PARA LIMITED et al 1. This international preliminary exand is transmitted to the applicant 2. This REPORT consists of a total	or national classification and IPO D 5/24 Examination report has been prepart according to Article 36. of	red by this International this cover sheet	ational Preliminary Examin et. claims and/or drawings wl	ing Authority	
amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total ofsheets.					
3. This report contains indications relating to the following items: I X Basis of the report II Priority III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV Lack of unity of invention V X Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI Certain documents cited VII Certain defects in the international application VIII Certain observations on the international application					
Date of submission of the demand Date of completion of this report 20 SEPTEMBER 2004 (20.09.2004)					
Name and mailing address of the IPEA/KR Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Feesimile No. 82-42-472-7140 Telephone No. 82-42-481-5566				(M)(M)	



INTERNATIONAL PRE NARY EXAMINATION REPORT

rnational aplication No. PCT/KR2003/001428

I.	<u>B</u>	Basis of the report				
1.	W	Vith regard to the elements of the international application:*				
	Σ	the international application as originally filed				
		the description:	, as originally filed			
	_	pages	, as originally fried , filed with the demand			
		pages, filed with the letter of	·			
	-	the claims:				
	L	nagres	, as originally filed			
		pages , as amended (together with an				
		pages, filed with the letter of	, mou with the definite			
	_	—				
	L	the drawings: pages	, as originally filed			
			, filed with the demand			
		pages, filed with the letter of				
	ſ	the sequence listing part of the description:				
	-	pages	, med with the demand			
		pages, filed with the letter of	, woman			
2	i re	With regard to the language, all the elements marked above were available or furnished to this Aut	hority in the language in which			
اً		the international application was filed, unless otherwise indicated under this item.				
	_	These elements were available or furnished to this Authority in the following language				
1	[the language of a translation furnished for the purposes of international search (under Rule 2.	o.1(0)).			
	[the language of publication of the international application (under Rule 48.3(b)).				
	ſ	the language of the translation furnished for the purposes of international preliminary exam	nination(under Kules 55.2 and/			
	•	or 55.3).				
	3.	With regard to any nucleotide and/or amino acid sequence disclosed in the international appreliminary examination was carried out on the basis of the sequence listing:	olication, the international			
	1	contained inthe international application in written form.				
		filed together with the international application in computer readable form.				
		furnished subsequently to this Authority in written form.				
		furnished subsequently to this Authority in computer readable form				
		The statement that the subsequently furnished written sequence listing does not go b	beyond the disc losure in the			
		international applicationas as filed has been furinshed.				
		The statement that the information recorded in computer readable form is identical to the been furnished.	e written sequence listing has			
4	4.	The amendments have resulted in the cancellation of:				
		the description, pages				
		the claims, Nos.				
		the drawings, sheet				
5	5.					
	. •	This report has been established as if (some of) the amendments had not been made, sing go beyond the disclosure as filed, as indicated in the Supplemental Box(Rule 70.2(c)).**	ce they have been considered to			
		Replacement sheets which have been furnished to the receiving Office in response to an invitation in this opinion as "originally filed." and are not annexed to this report since they do not contain and 70.17).	under Article 14 are referred to in amendments (Rules 70.16			
	**	Any replacement sheet containing such amendments must be referred to under item I and annexed	l to this report.			

J.	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
	citations and explanations supporting such statement

1. Statement 1-17 Claims Novelty (N) NO Claims YES Inventive step (IS) Claims NO Claims YES Industrial applicability (IA) Claims _NO Claims

2. Citations and explanations (Rule 70.7)

The following document is considered to be the closest prior art among the documents searched:

D1: JP 3-278821 A

The present invention relates to an external pressure type hollow fiber membrane having reinforcing supporters which are woven with mono-filaments or by mixed spinning of mono-filaments and multi-filaments; a method; and an apparatus for preparing the same.

D1 discloses a hollow fiber membrane element which consists of two spacer yarns which are wound spirally around a selectively permeable hollow fiber membrane in opposite directions, wherein the spacer yarns are made of mono-filaments.

1. Novelty

In the present invention, the reinforcing supporters are combined in the inside of the hollow fiber membrane as a body when manufactured. Whereas, two spacer yarns are spirally wound around the hollow fiber membrane. Thus claims 1-17 are novel.

2. Inventive step

The technical feature of a hollow fiber membrane equipped with reinforcing supporters of the present invention is not obvious from the technical feature of a hollow fiber membrane around which spacer yarns are wound of D1, since the reinforcing supporters are combined in the inside of the hollow fiber membrane as a body when manufactured in the present invention, whereas spacer yarns are added around the outer surface of the hollow fiber membrane. Consequently, claims 1-17 involve an inventive step.

3. Industrial applicability

Claims 1-17 are industrially applicable.